

1 ABSTRACT

2 An ultraviolet disinfection (UV) system for purifying effluent streams, in
3 particular produced by industrial or mechanical combustion, the system including a UV
4 light-based gas purifier including a UV light source, which is positioned to provide a
5 focused, controllable UV light output into the effluent streams contained by a channel
6 housing that has at least one UV dose zone for providing effective sterilization of
7 microorganisms and disinfection within an interior of the gas purifier. A method for UV
8 purification using gas purifiers is also provided.